David B Newell

List of Publications by Year in descending order

40 papers	4,831 citations	257450 24 h-index	302126 39 g-index
40 all docs	40 docs citations	40 times ranked	4901 citing authors

#	Article	IF	Citations
1	Design of Electrostatic Feedback for an Experiment to Measure G. , 2022, 1, 1-10.		0
2	Design of an enhanced mechanism for a new Kibble balance directly traceable to the quantum SI. EPJ Techniques and Instrumentation, 2022, 9, .	1.3	1
3	CODATA recommended values of the fundamental physical constants: 2018. Reviews of Modern Physics, 2021, 93, .	45.6	264
4	CODATA Recommended Values of the Fundamental Physical Constants: 2018. Journal of Physical and Chemical Reference Data, 2021, 50, .	4.2	81
5	Analytical determination of atypical quantized resistances in graphene p-n junctions. Physica B: Condensed Matter, 2020, 582, 411971.	2.7	15
6	Comparison Between Graphene and GaAs Quantized Hall Devices With a Dual Probe. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 9374-9380.	4.7	2
7	The performance of the KIBB-g1 tabletop Kibble balance at NIST. Metrologia, 2020, 57, 035014.	1.2	13
8	Accessing ratios of quantized resistances in graphene pâ€“n junction devices using multiple terminals. AIP Advances, 2020, 10, 025112.	1.3	6
9	Magnet System for the Quantum Electromechanical Metrology Suite. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 5736-5744.	4.7	7
10	Graphene Devices for Tabletop and High-Current Quantized Hall Resistance Standards. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 1870-1878.	4.7	32
11	Next-generation crossover-free quantum Hall arrays with superconducting interconnections. Metrologia, 2019, 56, 065002.	1.2	30
12	Atypical quantized resistances in millimeter-scale epitaxial graphene p-n junctions. Carbon, 2019, 154, 230-237.	10.3	19
13	Two-Terminal and Multi-Terminal Designs for Next-Generation Quantized Hall Resistance Standards: Contact Material and Geometry. IEEE Transactions on Electron Devices, 2019, 66, 3973-3977.	3.0	34
14	The Design and Development of a Tabletop Kibble Balance at NIST. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 2176-2182.	4.7	18
15	Dielectric Properties of NbxW1-xSe2 Alloys. Journal of Research of the National Institute of Standards and Technology, 2019, 124, 1-10.	1.2	3
16	Gateless and reversible Carrier density tunability in epitaxial graphene devices functionalized with chromium tricarbonyl. Carbon, 2019, 142, 468-474.	10.3	37
17	Data and analysis for the CODATA 2017 special fundamental constants adjustment. Metrologia, 2018, 55, 125-146.	1.2	135
18	Measuring the dielectric and optical response of millimeter-scale amorphous and hexagonal boron nitride films grown on epitaxial graphene. 2D Materials, 2018, 5, 011011.	4.4	24

#	Article	IF	Citations
19	Confocal laser scanning microscopy for rapid optical characterization of graphene. Communications Physics, 2018, 1, .	5.3	36
20	Towards epitaxial graphene p-n junctions as electrically programmable quantum resistance standards. Scientific Reports, 2018, 8, 15018.	3.3	31
21	Comprehensive optical characterization of atomically thin <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NbSe</mml:mi><mml:mn>2</mml:mn></mml:msub></ Physical Review B, 2018, 98, .	3.2	20
22	Quantum transport in graphene <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>p</mml:mi><mml:mtext>â^'</mml:mtext><mml:mi>n</m junctions with moirÃ© superlattice modulation. Physical Review B, 2018, 98, .	3.2	21
23	Preservation of Surface Conductivity and Dielectric Loss Tangent in Largeâ€Scale, Encapsulated Epitaxial Graphene Measured by Noncontact Microwave Cavity Perturbations. Small, 2017, 13, 1700452.	10.0	29
24	Electrical Stabilization of Surface Resistivity in Epitaxial Graphene Systems by Amorphous Boron Nitride Encapsulation. ACS Omega, 2017, 2, 2326-2332.	3.5	34
25	Probing the dielectric response of the interfacial buffer layer in epitaxial graphene via optical spectroscopy. Physical Review B, 2017, 96, .	3.2	17
26	CODATA Recommended Values of the Fundamental Physical Constants: 2014. Journal of Physical and Chemical Reference Data, 2016, 45, .	4.2	201
27	CODATA recommended values of the fundamental physical constants: 2014. Reviews of Modern Physics, 2016, 88, .	45.6	791
28	Edge-state transport in graphene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>p</mml:mi><mml:mo>â^'</mml:mo><mml:mi>n</mml:mi></mml:mi in the quantum Hall regime. Physical Review B, 2015, 92, .	3.2	34
29	Advances in Determination of Fundamental Constants. Journal of Physical and Chemical Reference Data, 2015, 44, .	4.2	8
30	Low Carrier Density Epitaxial Graphene Devices On SiC. Small, 2015, 11, 90-95.	10.0	59
31	A more fundamental International System of Units. Physics Today, 2014, 67, 35-41.	0.3	52
32	CODATA recommended values of the fundamental physical constants: 2010. Reviews of Modern Physics, 2012, 84, 1527-1605.	45.6	1,194
33	CODATA Recommended Values of the Fundamental Physical Constants: 2010. Journal of Physical and Chemical Reference Data, 2012, 41, 043109.	4.2	113
34	Resource Letter FC-1: The physics of fundamental constants. American Journal of Physics, 2010, 78, 338-358.	0.7	8
35	CODATA recommended values of the fundamental physical constants: 2006. Journal of Physical and Chemical Reference Data, 2008, 37, 1187-1284.	4.2	116
36	CODATA recommended values of the fundamental physical constants: 2006. Reviews of Modern Physics, 2008, 80, 633-730.	45.6	881

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37	Uncertainty Improvements of the NIST Electronic Kilogram. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 592-596.	4.7	129
38	Details of the 1998 watt balance experiment determining the Planck constant. Journal of Research of the National Institute of Standards and Technology, 2005, 110, 1.	1.2	50
39	Towards an electronic kilogram: an improved measurement of the Planck constant and electron mass. Metrologia, 2005, 42, 431-441.	1.2	121
40	Accurate Measurement of the Planck Constant. Physical Review Letters, 1998, 81, 2404-2407.	7.8	164